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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,227	03/14/2002	David E. Farrell	CWR 2 0265	6563

7590 03/01/2004

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EXAMINER

PATIDAR, JAY M

ART UNIT PAPER NUMBER

2862

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/937,227

Applicant(s)

FARRELL ET AL.

Examiner

Jay M. Patidar

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 16 is/are rejected.
- 7) ☒ Claim(s) 11-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. This communication is in response to applicant's amendment received on November 6, 2003.

2. Claims 1 are objected to because of the following informalities:

In claim 1, there is no antecedent basis for "susceptibility signal" at line 6; It is also vague as to how a susceptibility signal is generated; what generates such signal;

Appropriate correction is required.

3. The indicated allowability of claims 3,6-10 is withdrawn in view of the newly discovered reference(s) to Paulson. Rejections based on the newly cited reference(s) follow.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,4-10,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paulson et al. (5,061,680).

Paulson discloses an apparatus for determining magnetic susceptibility in an object 90 having an electromagnet 12; a superconducting quantum interference device 30; and a superconducting flux transformer (col. 8, lines 30+) that couples the susceptibility signal to the superconducting quantum interference quantum interference device (Note whole document). Paulson also discloses the high temperature superconductivity environment of operation (e.g. Col. 3, lines 41+, lines 56+; Col. 4, lines 57+; col. 5, lines 28+). Paulson fails to explicitly show the use of permanent magnet. However, the magnetic field system, depending on system size and performance requirements, may employ permanent magnet or conventional electromagnet or superconducting electromagnet or coil, following common practices well known to those in the art. Consequently, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Paulson to use a permanent magnet in place to enhance the sensitivity of the device. The method claim recited for using the apparatus in claim 16 is an inherent use of the apparatus of Paulson operates in the functional manner claimed by the applicant.

As to claim 3, the material yttrium barium copper oxide, yttriumstabilized zirconia for superconducting device are well known in the art (as evidenced by US 5,457,304; 6,566,146, 5,122,509). The nickel based substrate is considered a matter of design selection since any suitable base substrate for superconducting device may be used such as textured metal or metal alloy, e.g., pure nickel, copper, nickel alloy or copper alloy (US 5,741,377).

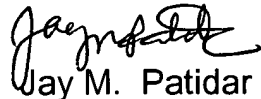
5. Claims 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay M. Patidar whose telephone number is 571-272-2265. The examiner can normally be reached on M-Thur 7:00-5:30.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jay M. Patidar  
Primary Examiner  
Art Unit 2862

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February 12, 2004